

WHAT IS CLAIMED IS:

1. A method for forming at least one flat-tube insertion slot in a heat exchanger header tube suitable for use in an air-conditioning system, comprising:

making a sawcut in the header tube, the sawcut having a first length and a first width; and

configuring the flat-tube insertion slot by punching into the region of the sawcut with a slot punch, the slot punch having at least one of a larger width and larger length relative to the respective first width and first length of the sawcut, to thereby form a rimmed insertion slot having a rim on at least a portion of its periphery extending into the interior of the header tube.

2. A method as claimed in claim 1, wherein the sawcut is introduced to a depth (d_1) which is less than the wall thickness (D) of the header tube.

3. A method as claimed in claim 1, wherein the sawcut is made in a direction parallel to the axis of the header tube.

4. A method as claimed in claim 1, wherein the sawcut is made in a direction transverse to the axis of the header tube.

5. A method as claimed in claim 1, wherein the first width, first length and the width and length of the slot punch are selected such that the rim formed on a first portion of the insertion slot is longer than the rim on at least one second portion of the periphery of the insertion slot.

6. A method as claimed in claim 5, wherein the rim is longer in the smaller dimension of the insertion slot.

7. A method for forming at least one flat-tube insertion slot in a heat exchanger header tube suitable for use in an air-conditioning system, comprising:

making a sawcut in the header tube, wherein the sawcut is introduced to a depth (d_1) which is less than the wall thickness (D) of the header tube; and

configuring the flat-tube insertion slot by punching into the region of the sawcut with a slot punch.

8. A method for forming at least one flat-tube insertion slot in a heat exchanger header tube suitable for use in an air-conditioning system, comprising:

making a sawcut in the header tube; and

configuring the flat-tube insertion slot by punching into the region of the sawcut with a slot punch, wherein the header tube comprises a multi-chamber header tube having a plurality of adjacent tube passageways separated at a distance from one another by means of respective web region(s), and the flat-tube insertion slot extends transversely over a plurality of the tube passageways, and wherein during the punching, at least a portion of the respective web region(s) is compressed to a level lower than a flat-tube insertion stop, whereby a space connecting at least two of the passageways will be defined upon insertion of a flat tube.

9. A method as claimed in claim 8, wherein a header-tube wall

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region forms the flat-tube insertion stop.

10. A method as claimed in claim 8, wherein the flat-tube insertion stop comprises peripheral wall surfaces on the distal inner walls of the two outermost header-tube passageways.

11. A method as claimed in claim 8, wherein the flat-tube insertion stop comprises a shoulder-shaped stop surface on each inner wall of the two outermost header-tube passageways, which surfaces are formed during the punching.

12. A method as claimed in claim 8, wherein the flat-tube insertion stop comprises at least one protrusion which is formed in a web region during the punching.

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